UNITED STATES INTELLIGENCE BOARD

OFFICE OF THE EXECUTIVE SECRETARY

18 October 1962

MEMORANDUM FOR : Chairman, Scientific Intelligence Committee

SUBJECT : Declassification of State Abstract from SIC Study, Soviet Science and Technology Through 1971

REFERENCE : SIC Memorandum for Executive Secretary, USIB, re Above Subject, 18 October 1962

Since (a) the SIC has determined that the enclosure with the reference (an abstract from the SIC study on "Soviet Science and Technology Through 1971") does not contain classified intelligence information and (b) arrangements have been made for handling the paper without attribution to the USIB, I concur in your view that "release" of the material does not require approval by USIB.

[redacted]
Executive Secretary

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SCIENTIFIC INTELLIGENCE COMMITTEE

18 OCT 1962

MEMORANDUM FOR: Executive Secretary, United States Intelligence Board

SUBJECT: Declassification of State Abstract from SIC Study, Soviet Science and Technology Through 1971

1. The Scientific Intelligence Committee has been asked by the Director of International Scientific Affairs, State Department to permit use of the attached abstract from the subject SIC study on an unclassified basis. The purpose is to furnish the many U.S. scientists travelling to the USSR with material on Soviet science and scientists in order that they may be better equipped to deal with their Soviet counterparts. The Summary and Conclusions of the subject study were approved by USIB 23 May 1962.

2. The SIC considered this request at its 9 October 1962 meeting. The Committee agreed to the declassification of the abstract after determining that it does not include classified intelligence information. [redacted] 25X1

[redacted] 25X1

3. In my opinion release of the material should not require USIB approval. If you concur, please inform me in writing for our records and I will release the material.

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Chairman

Attachment:
Soviet Science and Soviet Scientists

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SOVIET SCIENCE AND SOVIET SCIENTISTS

Environmental Factors Affecting Conduct of Research and Development

The lot of the Soviet scientist differs from that of others. Whatever his type of organization may be, he works for the State and is subject to its discipline and control. On the other hand, the State champions scientists, taking deliberate measures to encourage maximum production by the scientific community. The achievements of scientists are accompanied by graded financial awards and "fringe benefits" to provide a distinctive style of life, symbolic of a superior position in society. Soviet scientists, therefore, are able, generally speaking, to cope with the controls and pressures of their environment. Morale of Soviet scientists in most areas of science is fairly high, especially in the physical sciences and in engineering. Although Soviet scientists are eager to increase their contacts with Western scientists, personal communication between Soviet scientists and their Western counterparts remains very limited.

Utilization of Other Bloc Resources

The Academy of Sciences, USSR, has very systematically fostered the establishment of Bloc academies of sciences and has encouraged Bloc scientists to work on research projects at the Soviet Academy of Sciences facilities. This effort to "up-grade" Bloc science capabilities has been moderately successful. Bloc scientists have participated in or presented papers at international technical symposiums and in Soviet Bloc meetings. They also have organized native technical societies and conferences. Although prejudices, organizational problems, and mutual suspicion at first handicapped the dissemination and distribution of scientific and technical data, these obstacles have now been substantially reduced, and the interchange of information appears to be satisfactory.

Soviet Exploitation of Non-Bloc Science and Technology

Extent of Soviet Procurement and Utilization of Information from Open Sources--The Soviet Union continues to have an excellent program for the coordinated exploitation of all foreign sources of scientific research and technology. While Soviet efforts to obtain such information

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through participation in internationnal organizations and meetings and East-West exchanges have increased, the predominant and still most valuable source is the vast supply of open literature available throughout the world. Currently, about 50,000 new books and an equal number of journals, containing some 4,000,000 articles, plus an estimated 250,000 patents are added annually to this supply.

The Soviet information services collectively procure thousands of these publications monthly by purchase order, subscription, and exchange and conduct an outstanding program for processing and diss disseminating scientific and technical information to Soviet science and industry. Among the information services participating in the Soviet program is the large and excellent Soviet library system and several large information centers, among them the All-Union Institute of Scientific and Technical Information (VINITI).* This Institute, still the largest facility of its kind in the world, has a permanent staff of 2,000 and an additional 20,000 specialists on call for abstracting and editing foreign scientific literature. Around 600,000 abstracts of articles from some 12,250 foreign and 2,500 domestic periodicals in 65 languages are published annually in Soviet journals covering the natural, applied, and technical sciences.

Much foreign literature also is received and handled by the larger Soviet libraries and publishing houses. The Lenin Library, for example, has exchange agreements with 2,500 institutions in 73 countries, including 180 in the United States. In 1960 alone, such agreements involved the exchange of over 200,000 books. The publishing House of Foreign Literature, Ministry of Culture, USSR, is second only to VINITI in the field of foreign documentation. With a staff of over 2,000 translators and an extensive collection of foreign source material(over 4,000,000 volumes in its own library), this facility produces annually complete or abridged translations of articles from over 5,000 foreign books and 1,500 foreign journals and newspapers. The publications of this facility provide a more intensive coverage than that of VINITI's abstract journals of specialized fields of research important to the USSR.

In addition to libraries and information centers, the Soviets have a network of central bureaus and central institutes of technical information. These agencies collect and disseminate, at the factory level, information on the latest technical achievements from the foreign and domestic press. Also contributing to the Soviet effort are the many state and republic scientific and technical committees, various scientific and technical societies, and local houses of scientific and technical propaganda.

*The name of this institute has been changed to "Institute of Scientific Information", but it is still frequently referred to by its previous initials, VINITI.

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The Soviet information services program is an integral part of the Soviet scientific research effort and is largely under the guidance of the Academy of Sciences, USSR, and the new State Committee on Coordination of Scientific Research Work, Council of Ministers, USSR.

The Soviets also learn much through scientific and technical conferences and exchanges. Each member of a Soviet technical delegation collects information in his own or related fields. He attempts to procure pre-prints; working drawings of new types of equipment, especially those types that are considered commercial secrets by the manufacturing companies; and talks to specialists in an effort to round out information made public in technical papers. At the Second Geneva Conference on the Peaceful Uses of Atomic Energy, for instance, the Soviets spent long hours examining the American technical exhibits.

Science and Technology as Instruments of Soviet Foreign Policy

The Communist Party is attempting to project an image of itself as the central mechanism for scientifically directing the Soviet social system toward a Utopian society. It is the Soviet's hope that this image, buttressed by concrete achievements, will persuade uncommitted nations to elect communism. Quite clearly, science has become a major Soviet tool in projecting this image to other nations. Although nuclear and space sciences and automation play a major role in this strategy, other sciences, such as medicine, biology, and agriculture, also are used to further Soviet political objectives.

The most publicized Soviet technical achievements, such as in space rocketry, tend to overshadow in the eyes of the world the less spectacular effects of Western scientific gains. This has resulted in a gain in scientific prestige which adds significantly to the Soviet military and political world image relative to that of the West and strengthens the position of the USSR in the current East-West power struggle. Completely aware of the impact of an ostensible scientific superiority in this struggle, the Soviet Union has pushed its scientific propaganda "offensive" not only to enhance its military position, but also to influence the uncommitted neutral countries. Soviet scientific successes have been achieved during a period of emerging nationalism and newly acquired independence among many countries that are now evaluating the comparable efficiency of the Soviet and Western systems. In many cases, certainly, these new States will be prompted to choose that system which they feel would enable them most rapidly to close the gap between them and the advanced industrial countries. To win over these "neutrals," the Soviets export science and technology in certain fields for which there is immediate need and in which the Soviet Union is especially well qualified.

The Soviet Union also is participating increasingly in international conferences. An increasing number of Soviet scientists are becoming officials of international societies. In fields where the Soviet Union lags behind the West, Soviet scientists also attend international meetings, contributing little but establishing contacts and learning much. Moreover, for maximum publicity, the Soviets often hold scientific symposia so as to coincide with their most recent scientific success. For example, on 19 April 1961, at about the time of Major Gagarin's flight, Professor A. A. Blagonravov, Academy of Sciences, USSR, delivered a lecture in Rome on "First Man in Space".

Scientific-technical relations between the Bloc and Western countries have been characterized by a persistent effort of the Bloc, headed by the USSR, to maintain a steadily increasing rate of exchange of scientific-technical personnel and participation in international scientific conferences. As this program has matured and expanded, the Soviets have become increasingly more selective in their efforts. Scientific, technical, and professional exchanges continue to be the first interest and still dominate the exchange picture. The Soviet Government frequently attempts to create the public impression that the United States does not cooperate fully in implementing exchanges. In the field of student exchanges, the Soviet effort is not too successful.

The Role of Science in the "Transition to Communism"

The Soviets view sciences as indispensable in the transformation of the material-technical and social-cultural aspects of their society. In their view, science and technology alone afford the methods for complex mechanization of industry, agriculture, construction and transport; a planned changeover to automatic plants and enterprises; rapid changeover to modern high-speed procedures for processing, transmitting, and storage of information. These techniques, in turn, would be of greatest significance in furthering scientific research, industrial production, and state and economic management. Of equal importance to Soviet leaders is the use of scientific methods to transform the values and beliefs of their citizens and those of other countries to conform with overall objectives. For these reasons, certain aspects of learning theory, experimental psychology, psychophysiology, and social sciences are receiving significant support.

The Role of Ideology in Soviet Sciences

Ideology has been used by the Soviet regime as a managerial device for control purposes and for the implementation of Party decisions. Such Party decisions are based on dogmas of materialism and the class

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struggle which makes science "a tool for the subjugation of the forces of nature and society to the interests of society." Ideological "dogmas," confined for the most part to social science and biology, have weakened those sciences; but physical science has not been affected greatly. Differences in quality of work among various fields of Soviet science occur partially because some scientists prefer to enter fields that are least subject to doctrinal vagaries and to leave the controversial fields to the less qualified but more doctrinaire scientists. Ideological harassment by the regime, while still evident, has lost the terror it had during the latter part of the Stalin period, and its effects probably will not again be so severe.

The Party also plays a direct role in the control and administration of science. Since it is vitally interested in scientific successes, the objectives of its policies on sciences, whether in actuality they are good or bad, are to ensure these successes. The powerful apparatus of the Party can actually have positive effects on the conduct of research projects, particularly high-priority projects, where it can break bureaucratic bottlenecks. Party officials often are assigned to important scientific projects as political administrators. Many are good administrators and are able to secure the services of top scientists to aid in planning the project. These scientists often recruit other scientists among their friends to occupy subordinate roles in the project.

May 23, 1962/

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